Appl. No. 10/002,781
Amdt. Dated February 27, 2006
Reply to Office Action of November 28, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

30   Listing of Claims:

1.   (currently amended) A method for interleaving print jobs comprising:

receiving a plurality of original print jobs at a non-printer computing device;

35   breaking down at least one of said original print jobs into a plurality of smaller sub-jobs with said non-printer computing device;

tagging said plurality of smaller sub-jobs with an output mode code wherein said output mode code is the same for all said smaller sub-jobs originating from the same original print job;

40   interleaving said smaller sub-jobs and any remaining original print jobs in an alternating sequence of print jobs with said non-printer computing device; and

sending said alternating sequence of print jobs sub-jobs to a printer in said sequence.

45   2.   (previously amended)   The method of claim 1 wherein said non-printer computing device is a client computing device.

3.   (previously amended)   The method of claim 1 wherein said non-printer computing device is a network print server.

4.   (cancelled)

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5. (previously amended) The method of claim 1 wherein said breaking down is performed by a software print system component in an operating system print server.

6. (cancelled)

7. (previously amended) The method of claim 5 wherein said print system component is independent of an operating system print driver.

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8. (previously amended) The method of claim 5 wherein said print system component is a network print spooler that is independent of a printer.

9. (previously amended) The method of claim 5 wherein said print system component is a network print driver.

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10. (original) The method of claim 1 wherein said breaking down results in sub-jobs of approximately equal size.

11. (original) The method of claim 1 wherein said breaking down results in sub-jobs of approximately equal printing time.

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12. (original) The method of claim 1 wherein said alternating sequence places sub-jobs originating from smaller original print jobs toward the front of the print order.

13. (currently amended) A method for interleaving print jobs, said method comprising:

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receiving a plurality of original print jobs at a non-printer, print system component before said jobs arrive at a printer;

breaking down at least one of said original print jobs into a plurality of smaller sub-jobs with said print system component;

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<u>tagging said plurality of smaller sub-jobs with an output mode</u>
<u>code wherein said output mode code is the same for all said smaller</u>
<u>sub-jobs originating from the same original print job;</u>

interleaving said <u>smaller</u> sub-jobs <u>and any remaining original</u>
<u>print jobs</u> in an alternating sequence <u>of print jobs</u> with said print
system component; and

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sending said <u>alternating sequence of print jobs</u> <s>sub-jobs</s> to a
printer in said sequence.

14. (currently amended) A method for reducing delay of smaller print
jobs in a print queue, said method comprising:

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receiving a plurality of original print jobs at a print system
component before said print jobs arrive at a printer, said plurality of
original print jobs comprising at least one larger print job and at least
one smaller print job;

breaking down said larger original print job into smaller sub-
jobs;

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<u>tagging said smaller sub-jobs with an output mode code;</u>

interleaving said sub-jobs with said smaller original print job in
an alternating sequence; and

sending said sub-jobs and said smaller original print job to a
printer in said sequence.

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15. (original) The method of claim 14 further comprising breaking down
said smaller original print job into smaller sub-jobs and wherein said
interleaving comprises interleaving said smaller sub-jobs from said
larger print job with said smaller sub-jobs from said smaller print job.

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16. (currently amended)   A system for interleaving print jobs before said print jobs arrive at a printer, said system comprising:

a receiver for receiving a plurality of original print jobs, before said print jobs arrive at a printer;

a partitioner for breaking down at least one of said original print jobs into a plurality of smaller sub-jobs;

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a tagger for tagging said plurality of smaller sub-jobs with an output mode code wherein said output mode code is the same for all said smaller sub-jobs originating from the same original print job;

an interleaver for interleaving said smaller sub-jobs and any remaining original print jobs in an alternating sequence of print jobs; and

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a sender for sending said alternating sequence of print jobs sub-jobs to a printer.

17. (currently amended)   A computer readable medium comprising instructions for performing functions within a non-printer, print system component, said instructions comprising the acts of:

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receiving a plurality of original print jobs at a print system component before said print jobs arrive at a printer;

breaking down at least one of said original print jobs into a plurality of smaller sub-jobs;

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tagging said plurality of smaller sub-jobs with an output mode code wherein said output mode code is the same for all said smaller sub-jobs originating from the same original print job;

interleaving said smaller sub-jobs with any remaining original print jobs in an alternating sequence of print jobs; and

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sending said alternating sequence of print jobs sub-jobs to a
125   printer in said sequence.

18. (currently amended)   A computer data signal embodied in an
electronic transmission, said signal having the function of interleaving
print jobs, said signal comprising instructions for a non-printer, print
system component to perform the acts of:

130   receiving a plurality of original print jobs at a print system
component before said print jobs arrive at a printer;

breaking down at least one of said original print jobs into a
plurality of smaller sub-jobs;

tagging said pluarility of smaller sub-jobs with an output mode
135   code wherein said output mode code is the same for all said smaller
sub-jobs originating from the same original print job;

interleaving said smaller sub-jobs and any remaining original
print jobs in an alternating sequence of print jobs; and

sending said alternating sequence of print jobs sub-jobs to a
140   printer in said sequence.

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